

CASE 3810: Application of BRONCO
OIL CORP. for a dual completion,
Lea County, New Mexico.

Case Number

3810

Application
Transcripts.

Small Exhibits

ETC.

State of New Mexico
Oil Conservation Commission



P. O. BOX 2000
SANTA FE

August 1, 1968

3809
3810

Re: Case No. _____
Order No. R-3457 and R-3458
Applicant:
Solar Oil & Bronco Oil

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

A. L. Porter, Jr.
A. L. PORTER, Jr.
Secretary-Director

Carbon copy of order also sent to:

Hobbs OCC X
 Artesia OCC _____
 Aztec OCC _____
 Other _____

-2-

CASE No. 3810
Order No. R-3458

IT IS THEREFORE ORDERED:

(1) That the applicant, Bronco Oil Corporation, is hereby authorized to complete its Saltmount Well No. 2, located in Unit O of Section 21, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce oil from the Teague-Blinebry Pool and an undesignated Tubb-Drinkard pool through parallel strings of 2 3/8-inch tubing, with separation of zones by a packer set at approximately 5949 feet;

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packer-leakage tests upon completion and annually thereafter during the Annual Gas-Oil Ratio Test Period for the undesignated Tubb-Drinkard pool.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


GUYTON B. HAYS, Member


A. L. PORTER, Jr., Member & Secretary


esr/

DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 24, 1968

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or
A. L. Porter, Jr., Alternate Examiner:

CASE 3809: Application of Solar Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Travis Well No. 2 located in Unit J of Section 21, Township 23 South, Range 37 East, Lea County, New Mexico, to produce oil from the Teague-Blinebry and undesignated Tubb-Drinkard pools through parallel strings of tubing.

CASE 3810: Application of Bronco Oil Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Saltmount Well No. 2 located in Unit O of Section 21, Township 23 South, Range 37 East, Lea County, New Mexico, to produce oil from the Teague-Blinebry and undesignated Tubb-Drinkard pools through parallel strings of tubing.

CASE 3811: Application of Charles B. Read for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill his Marathon State Well No. 1 at a location 1980 feet from the South line and 660 feet from the West line of Section 7, Township 19 South, Range 35 East, Scharb-Bone Springs Pool, Lea County, New Mexico, in exception to the pool rules which require the first well drilled on a unit to be located in the NE/4 or the SW/4 of the quarter section.

CASE 3812: Application of Tenneco Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Southwest Henshaw (Premier) Unit Area comprising 1720 acres, more or less, of Federal lands in Township 16 South, Range 30 East, West Henshaw-Grayburg Pool, Eddy County, New Mexico.

CASE 3813: Application of Tenneco Oil Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Southwest Henshaw (Premier) Unit Area by the injection of water into the Premier sand through nine injection wells in Sections 7, 8, 17, 18 and 19, Township 16 South, Range 30 East, West Henshaw-Grayburg Pool, Eddy County, New Mexico.

CASE 3814: Application of Humble Oil & Refining Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Penrose zone of the Queen formation in the perforated interval from 3818 feet to 3838 feet in its New Mexico "G" State Well No. 17 located 330 feet from the South line and 1850 feet from the West line of Section 23, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico. If said Penrose zone does not prove satisfactory, then the applicant proposes to deepen said well and dispose into the San Andres formation.

CASE 3815: Application of Humble Oil & Refining Company for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation in the interval from 5670 feet to 6030 feet in its Chalk Bluff Draw Unit (A) Well No. 19 located 990 feet from the South line and 1650 feet from the West line of Section 16, Township 18 South, Range 27 East, Empire Abo Pool, Eddy County, New Mexico.

CASE 3816: Application of Humble Oil & Refining Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Wolfcamp formation in the interval from 10,199 feet to 10,530 feet in its H. A. Townsend Well No. 6 located 1980 feet from the North and East lines of Section 9, Township 16 South, Range 35 East, Townsend Wolfcamp Pool, Lea County, New Mexico.

CASE 3817: Application of Continental Oil Company for reinstatement of cancelled underproduction, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the general rules and regulations for prorated gas pools of Southeastern New Mexico promulgated by Order No. R-1670, as amended, to permit the reinstatement of underproduction accumulated by its Stevens A-35 Well No. 2 located in Unit J of Section 35, Township 23 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico, cancelled December 31, 1967. Applicant requests that its Stevens A-35 Well No. 1 located in Unit L and its Stevens A-35 Well No. 2 located in Unit J, both in the aforesaid Section 35 and dedicated to the same non-standard gas proration unit, be permitted to produce the aforesaid cancelled underproduction.

- CASE 3818: Application of Continental Oil Company for an exception to Rule 506, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the statewide limiting gas-oil ratio of 2,000 feet of gas per barrel of oil as promulgated by Commission Rule 506 for its Warren Unit Well No. 11, located in Unit A of Section 35, Township 20 South, Range 38 East, Warren-Drinkard Pool, Lea County, New Mexico.
- CASE 3819: Application of Cities Service Oil Company for the institution of gas prorationing in the Buffalo Valley-Pennsylvanian Gas Pool, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the limitation of gas production from the Buffalo Valley-Pennsylvanian Gas Pool in Chaves County, New Mexico, to reasonable market demand and to the capacity of gas transportation facilities, and that the subject pool be governed by the general rules and regulations for the prorated gas pools of Southeastern New Mexico insofar as said general rules and regulations are not inconsistent with the special rules and regulations governing the subject pool. Further, the applicant proposes that the allowable production from the pool be allocated among the wells in the pool on a 100% surface acreage basis.
- CASE 3820: Application of El Paso Natural Gas Company for an unorthodox gas well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Harvey "A" Well No. 3 at a point 890 feet from the South line and 1650 feet from the East line of Section 32, Township 27 North, Range 7 West, Blanco-Mesaverde Pool, Rio Arriba County, New Mexico, in exception to the pool rules which require locations to be in either the Northeast or Southwest quarter of the section.
- CASE 3821: Application of Marathon Oil Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp formation underlying the SE/4 of Section 22, Township 20 South, Range 35 East, Lea County, New Mexico. Said acreage to be dedicated to a well to be drilled 660 feet from the South and East lines of said Section 22, and within one mile of the Southeast Lea-Wolfcamp Gas Pool.

Case 3822: Application of Aztec Oil & Gas Company for commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle San Andres production from its State "AJ" lease comprising the SW/4 and the W/2 NE/4 of Section 1 and its Amerada State lease comprising the N/2 NW/4 of Section 12, all in Township 18 South, Range 36 East, Arkansas Junction-San Andres Pool, Lea County, New Mexico, allocating production to each lease on the basis of periodic well tests.

CASE 3805: CONTINUED FROM THE JULY 10, 1968, EXAMINER HEARING

Application of Benson-Montin-Greer Drilling Corporation and Lloyd B. Taylor for Pressure Interference Tests and Back Allowable, San Juan County, New Mexico. Applicants, in the above-styled cause, seek authority to extend for an additional 60-day period from July 8, 1968, the shut-in test period authorized for one well in the La Plata Gallup Oil Pool, San Juan County, New Mexico, by Commission Order No. R-3399 and to also extend the back allowable make-up period for said well. Applicants further seek authority to drill three additional La Plata oil wells in Section 6 of Township 31 North, Range 13 West, and Sections 31 and 32, Township 32 North, Range 13 West, and to shut said wells in immediately after recovery of load oil and the establishment of initial potentials, for a period of up to 180 days for the purpose of conducting pressure interference tests, and to make-up the production lost during said test period at a later date. Applicants further seek a provision for administrative extension of the shut-in test period and the make-up period.

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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
July 24, 1968

EXAMINER HEARING

IN THE MATTER OF:

Application of Solar Oil Company for a
dual completion, Lea County, New Mexico.)

Case No. 3809

Application of Bronco Oil Corporation
for a dual completion, Lea County,
New Mexico.)

Case No. 3810

BEFORE: Daniel S. Nutter
Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We'll call, next, Case 3809

MR. HATCH: Case 3809. Application of Solar Oil Company for a dual completion, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, Jason Kellahin of Kellahin and Fox, appearing for the Applicant. At this time, I would like to ask that Case 3809 be consolidated, for the purposes of hearing, with Case 3810, the application of Bronco Oil Corporation since these are concerned with offsetting wells completed in the same producing horizon and utilized similar completion and identical equipment and the testimony and exhibit would be the same for both.

MR. NUTTER: And is the witness the same for both?

MR. KELLAHIN: And the witness is the same for both cases.

MR. NUTTER: We'll call the next case, 3810.

MR. HATCH: Case 3810, application of Bronco Oil Corporation for a dual completion, Lea County, New Mexico.

MR. KELLAHIN: We will have one witness for the two cases.

(Witness sworn.)

MAX E. CURRY

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A My name is Max E. Curry.

Q By whom are you employed and in what position,
Mr. Curry?

A I am representing Solar Oil Company in Case 3809
and Bronco Oil Corporation in 3810. I'm an independent oil
producer and consulting engineer. I represent Bronco Oil
Corporation in the capacity of Executive Vice-President and
Solar Oil Company in the capacity of President.

Bronco Oil Corporation is a Nevada corporation.
Solar is a Texas corporation. Both are approved to do business
in the State of New Mexico and have their principal offices
in Midland, Texas.

I'm a petroleum engineer registered in the State of
Texas and have appeared before this Commission many times as
an expert witness. I have personally completed both of the
wells subject to these requests for dual completion. In each
of the cases, I am familiar with the equipment and the completion
procedures used.

MR. KELLAHIN: Are the witness's qualifications
acceptable?

MR. NUTTER: They are.

Q Mr. Curry, would you briefly summarize the history of the Teague Pool?

A The Teague Field was discovered in 1948 by Gulf Oil Corporation when their Liminian Number 6 Well was completed in the McKee Formation. The Ellenburger Pay Horizon was discovered when Gulf drilled their Liminian B. Well Number 11, and the Devonian production was discovered when Hamon-Carter-Hill B Number 1 was completed in that horizon in 1952. These horizons were depleted and the wells plugged and abandoned on several leases in 1966. Bronco and Solar acquired several leases and re-entered several wells, completing them in either the Tubb Drinkard or Blinbry Formations.

In December of 1967, we completed the first well that would permit us to run a seven-inch OD casing, which is the Saltmount Number 2, which we were able to dual complete in the Blinbry and the Tubb Formations. The well was completed by selectively perforating and treating each of the producing horizons, the Tubb Drinkard and the Blinbry, separately; an Otis permanent type packer set at the top of the Tubb Formation, separate strings of tubing were run to complete the well. Packer leakage tests were run and separate allowables were requested by filing all of the proper State forms to this Commission.

Q Now, both of these wells have been completed, I take it.

A Yes, they have.

Q Is the completion that has been made on these wells a conventional type of completion that has been approved by this Commission?

A These are conventional procedures. Each zone is segregated by an approved type packer and each is produced through separate tubing strings. Each is equipped so it may be pumped in its later life and produced to economic limit.

Q Now, is this type of completion to the prevention of waste?

A Yes, it is. The Tubb Drinkard Formation in this area produces at relatively low rates and separate wells would probably not be drilled to this formation.

Q Now, can you support this contention with some information on the reserves and the costs involved?

A Yes. Although the Blinbry Formation is recognized as an economic producer in this area, the Tubb Drinkard is expected to recover no more than fifty to 75,000 barrels of oil in the best wells. The cost to develop this formation as a single zone producer is approximately \$87,000.00 which is obviously not an attractive objective for a single zone development. The additional cost of developing the Tubb Drinkard as a dual

well with the Blinebryis about \$35,000.00.

Q Do you believe the operators in this area would develop the Tubb Drinkard Formation under single zone completions?

A I do not believe that a single zone well can be justified under any circumstances other than a salvage operation. If the development were dependent upon the Tubb Drinkard Formation, no further wells would be drilled; indeed, very few existing wells would have been drilled.

Q This is an undesignated pool, is it not, Mr. Curry?

A The BlinebryFormation has been designated as producing from the Teague BlinebryPool. The Tubb Drinkard is an undesignated pool at this time.

Q And heretofore, there has been no dual completion to prove by this Commission, is that correct?

A Not in this field.

Q Not in this field. Now, do you have exhibits which will support your position in this case, Mr. Curry?

A Yes. I have Exhibit Number 1 which is a schematic drawing showing the relative positions.

MR. KELLAHIN: Would you mark that Exhibit Number 1, please. Mark this Exhibit Number 2, also, and 3.

(Whereupon, Applicants Exhibits Numbers 1, 2 and 3 were marked for identification.)

A Exhibit Number 1, I wish to submit a schematic drawing

representing the physical equipment used in the wells in this completion and it shows its relative position to the producing horizons by incorporating a gamma ray neutron log of each of the wells on the exhibit.

Exhibit Number 2 is a set of State forms submitted on each of the subject wells relative to their respective packer leakage tests. Exhibit Number 2 represents the Travis Number 2.

Exhibit Number 3 is the same set of forms on the Saltmount Number 2 Well.

Q Now, do the information contained in these exhibits indicate that there is a complete segregation of the two producing horizons?

A Yes, it does, both by pressure and by gas-oil ratio.

Q Attached to the exhibit, is there a plat showing the location of the wells?

A Yes, and Exhibit Number 2 and Exhibit Number 3 each contain a plat showing the leases which are not only offset leases, but the wells in question are direct offsets, both completed in the same producing horizon and have comparable equipment.

Q Now, on Exhibit Number 3, does the area shown on the exhibit include other fields in which the subject producing horizons are completed in dual completions?

A Yes, it does.

Q And the same type of equipment used?

A Yes.

Q What fields would those be, Mr. Curry?

A This would be the Fowler Pool, the Blinebry Pool, the Paddock and Drinkard Pools of Lea County, New Mexico.

Q Were Exhibits 1, 2 and 3 prepared by you or under your supervision?

A Yes, they were.

MR. KELLAHIN: At this time, I offer in evidence Exhibits 1, 2 and 3.

MR. NUTTER: Applicants Exhibits 1, 2 and 3 will be admitted in these cases.

MR. KELLAHIN: That concludes the direct examination of the witness, Mr. Nutter.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Curry, I notice there's quite a difference in the potential as far as the two wells are concerned in the upper pool, that's the Blinebry.

A Yes.

Q What is the reason for that difference? I notice they've both got about four or 500 feet of perforations.

A I think the principal difference there is the amount of loader oil, the time after completing the wells, the extent to which they've been cleaned up.

Q You think that they both actually are pretty similar in productivity?

A Yes, they are.

Q Now, this would also then account for the difference in the GORs; in other words, the high GOR is on the well that made the most oil and that wouldn't account for it, would it?

A The Blinberry Formation is a rather complex thing and I'm not sure I can explain or shall I even attempt to explain this. The rate at which we flow these wells, more or less, controls the GOR and they are actually produced at a rate and in such a manner to maintain as low a GOR in actual practice as we practically can.

Q What is the GOR limit for the Teague Blinberry Pool, do you know?

A The GOR limit for the Teague Blinberry Pool at this time falls under the Statewide rules which is 2,000 to one.

Q And the Solar well has a GOR of 2,600, so it's going to be a penalized well unless that GOR is brought down.

A Yes, it is. We can intermit this well and produce it actually below the GOR set for Statewide rules at this time.

However, I'd like to point out this is the only field producing from the Blinbry Formation in the State with which I am familiar that falls under Statewide rules.

Q Now, on this packer leakage test, you didn't have a GOR on the Solar well for the Tubb Drinkard. Have you ever gotten a GOR for that one yet?

A I think this will be produced. We have potentialized the well and tested it but our tests were taken not on continuous recording instruments.

Q Now, you do have the gravity for both zones. What about bottom hole pressures for the two zones?

A We have a bottom hole pressure for each of the zones in the field. I don't have the exact figures available here right at this time. They are, I'll say, 200 to 300 pounds difference.

Q Could you furnish us with those bottom hole pressures of the two zones?

A We'll be glad to, yes.

MR. NUTTER: Are there any other questions of Mr. Curry? He may be excused. Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: That's all, Mr. Nutter. Thank you.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 3809 or 3810? We'll take the cases under advisement.

I N D E X

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STATE OF NEW MEXICO)
)
 COUNTY OF BERNALILLO)

I, CHARLOTTE MACIAS, a Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Charlotte Macias
 Notary Public

My Commission Expires:

February 10, 1971.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3809-3810 heard by me on 7/24, 1968.

[Signature], Examiner
 New Mexico Oil Conservation Commission